

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method, for use with an inkjet device, of printing an area of a substrate in a plurality of passes using radiation curable ink, the method comprising

a.) depositing with ~~the~~[[an]] inkjet device a plurality of spaced apart droplets of radiation curable ink onto the substrate in a first pass on the area;

b.) partially curing the ink deposited in the first pass such that an exposed surface of the partially cured ink is in non-solidified form;

c.) depositing with ~~an~~~~the~~ inkjet device a second plurality of spaced apart droplets of radiation curable ink onto the substrate in a second pass on the area,[[;]]

wherein a.) and c.) are performed with the inkjet device in which discrete droplets of ink are deposited from at least one nozzle onto the substrate, the deposition of adjacent droplets of ink are separately controlled to permit mutually different adjacent droplets to be deposited on the substrate; and

d.) fully curing the ink on the area.

2. (Cancelled).

3. (Original) A method according to Claim 1, wherein the partial curing step is such that an exposed surface of the partially cured ink is in substantially liquid or gel form.

4. (Original) A method according to Claim 1, wherein the exposed surface of the partially cured ink is prevented from solidifying by oxygen inhibition.

5. (Original) A method according to Claim 1, wherein the partial curing step effects at least partial curing of the ink adjacent the substrate.

6. (Original) A method according to Claim 1, wherein the partial curing step effects at least partial curing of the ink such that the partially cured ink is stable after a period of minutes.

7-9. (Cancelled).

10. (Original) A method according to Claim 1 wherein the step of partially curing the ink is effected by a first device and the step of fully curing the ink is effected by a second device wherein the location of the first device is separate from the location of the second device.

11. (Cancelled).

12. (Original) A method according to Claim 1 wherein the ink comprises UV curable ink.

13. (Cancelled).

14. (Original) A method according to Claim 12 wherein the wavelength of the radiation used in the partial curing step is greater than about 370 nm, preferably approximately between 380 nm and 420 nm, and more preferably approximately between 385 nm and 400 nm.

15. (Original) A method according to Claim 1 wherein the fully curing step comprises providing an inerting or low oxygen environment.

16-24. (Cancelled).

25. (Original) A method according to Claim 1, wherein the partially cured or partially solidified ink is such that at least a part of the ink can be displaced by rubbing.

26-27. (Cancelled).

28. (Original) A method according to Claim 1 wherein the first pass of ink is such that it is substantially wetted by ink of the second pass.

29. (Currently Amended) A method, for use with an inkjet device, of printing an area of a substrate in a plurality of passes using radiation curable ink, the method comprising:

depositing a first pass of ink on a first sub-area of the area by using radiation curable ink; and

substantially immobilising the ink of the first pass on the area in a first partial-curing step so that a layer of ink adjacent the substrate has a viscosity greater than the viscosity of an exposed surface of the ink,

wherein the immobilised ink is such that it is substantially wettable by ink of a subsequent pass, and

depositing a second pass of ink on a second sub-area adjacent to the first sub-area by using radiation-curable ink, wherein only a minor part of the second pass of ink is deposited on top of partially cured ink deposited on the substrate including the first pass of ink.

30-32. (Cancelled).

33. (Original) A method according Claim 1 further comprising emitting the ink using a printer carriage having one or more printheads;

at least partially curing the emitted ink using a first radiation source;
and

substantially fully curing the ink using a second radiation source,

wherein the first radiation source for partially curing the ink is arranged to move with the one or more printheads, and the second radiation source for substantially fully curing the ink is arranged such that the one or more printheads can move relative to such radiation source.

34-35. (Cancelled).

36. (Original) A method according to Claim 1 further comprising emitting radiation from a light emitting diode (LED) towards the ink.

37. (Cancelled).

38. (Currently Amended) Apparatus for an inkjet device, for use in printing an area of a substrate in a plurality of passes using radiation curable ink, comprising:

a printhead arranged to deposit a first pass of ink using radiation curable ink on a first sub-area of the area;

means for partially curing the ink deposited on the area wherein the means for partially curing the ink is adapted to partially cure the ink such that an exposed surface of the partially cured ink is in non-solidified form and that a layer of the partially cured ink adjacent the substrate has a viscosity greater than the exposed surface of the partially cured ink; and

a printhead arranged to deposit a second pass of ink on a second sub-area adjacent to the first sub-area, wherein only a minor part of the second pass of ink is

deposited on top of partially cured ink deposited on the substrate including the first pass of ink; and means for substantially fully curing the ink on the area.

39. (Canceled).

40. (Original) Apparatus according to Claim 38, wherein the means for partially curing the ink is adapted to partially cure the ink such that an exposed surface of the partially cured ink is in substantially liquid or gel form.

41. (Cancelled).

42. (Original) Apparatus according to Claim 38 wherein the means for partially curing the ink is adapted to at least partially cure the ink adjacent the substrate.

43-46 (Cancelled).

47. (Original) Apparatus according to Claim 38 wherein the means for partially curing the ink is separate from the means for fully curing the ink.

48-49. (Cancelled).

50. (Original) Apparatus according to Claim 38 comprising a radiation source and means for varying the radiation output of the radiation source so as to vary the level of gloss on the printed ink on the area.

51-67. (Cancelled).

68. (Currently Amended) Apparatus according to Claim 38, ~~further comprising~~ wherein the means for partially curing the ink is a light emitting diode (LED) adapted to emit radiation towards the ink.

69-75. (Cancelled).

76. (Original) An inkjet device, including an apparatus according to Claim 38 for printing on an area of a substrate using ink, the device comprising

a printer carriage having one or more printheads for depositing the first and second passes of ink and a radiation source for partially curing ink emitted by the one or more printheads; and

a radiation source for substantially fully curing the ink,

wherein the radiation source for partially curing the ink is arranged to move with the one or more printheads, and the radiation source for substantially fully curing the ink is arranged such that the one or more printheads can move relative to such radiation source.

77. (Cancelled).

78. (Original) An inkjet device according to Claim 76 further comprising a beam movable with respect to the area of the substrate and a printer carriage adapted to move along the beam as well as with the beam, wherein the radiation source for fully curing the ink and the beam are adapted to be relatively moveable.

79-80. (Cancelled).

81. (Original) A method according to claim 1, wherein the partial curing step includes a further step of varying the level of partial cure depending on the rate of printing.

82. (Original) A method according to claim 81, wherein the dose of curing radiation applied to a region of ink in the partial curing step is varied so as to vary the level of gloss of the printed ink on the area.

83. (Original) A method according to claim 1, wherein ink of the second pass is applied on top of ink of the first pass.